UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/923,070	08/06/2001	Hong Jin	7682-059-999	1768

20583 7590 02/17/2004

JONES DAY
222 EAST 41ST STREET
NEW YORK, NY 10017

EXAMINER	
LUCAS, ZACHARIAH	
ART UNIT	**PAPER NUMBER**
1648	

DATE MAILED: 02/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/923,070	JIN ET AL.	
	Examin r	Art Unit	
	Zachariah Lucas	1648	

-- Th MAILING DATE of this communication app ars on th cover she t with the correspond nce address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 June 2003* .

2a)☐ This action is FINAL. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *25-38* is/are pending in the application.

4a) Of the above claim(s) *33,34 and 38* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *25-32 and 35-37* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *8, 14* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group VI, and subgroup 6 is acknowledged. The Applicant argued in traversal in the Response of April 4, 2003 is on the ground(s) that the newly submitted claims avoid the restriction. This is not found persuasive because the amendment of the claims change the format of the claims does not absolve the Applicant of the requirement to elect an invention for prosecution. The requirement is still deemed proper and is therefore made FINAL.

2. Claims 33, 34, and 38 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the paper filed on April 4, 2003.

3. Currently, claims 25-32, and 35-37 are under examination to the extent that they read on the elected invention.

Information Disclosure Statement

4. The information disclosure statements (IDS) submitted on August 6, 2001 and on April 22, 2003, are in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statements have been considered by the examiner.

5. The document identified as reference AZ in the August 2001 IDS is not a published reference per se, but is a listing of published references listed as relevant to the examination of a

claim set. While the search report itself has not been separately considered, the references listed therein were listed and considered in the August 2001 IDS.

Priority

6. Applicant has not complied with one or more conditions for receiving the benefit of an earlier filing date under 35 U.S.C. 120 as follows with regards to the claim of priority to earlier U.S. Application 08/316,439: the present application was not filed by an inventor named in the prior application. It is noted that the present application shares one or more inventors with the prior application 09/161,122, which in turn was amended to share at least one inventor with the application 08/316,439. However, the present application must still share at least one inventor with application 08/316,439 in order to be accorded benefit of that application's priority date. As the present application does not presently share any of the named inventors with application 08/316,439, priority is not granted at this time.

Furthermore, for Applications filed on or after November 29, 2000, where such application claim benefit to an earlier filed application, the specifications of the newly filed application must be amended to contain reference to such earlier filed application within the later time of four months from the filing date of the application, or sixteen months from the filing date of the earlier filed application to which priority is being claimed. In the present case, the Applicant amended to specification to contain reference to the 08/316,439 application on April 4, 2003. See 37 CFR 1.78(a)(2). This date is outside of the time periods set by 37 CFR 1.78.

If the reference required by 35 U.S.C.120 and paragraph 37 CFR 1.78(a)(2) of this section is presented in a nonprovisional application after the time period provided by paragraph

(a)(2)(ii) of this section, the claim under 35 U.S.C. 120, 121, or365(c) for the benefit of a prior-filed copending nonprovisional application or international application designating the United States of America may be accepted if the reference identifying the prior-filed application by application number or international application number and international filing date was unintentionally delayed. A petition to accept an unintentionally delayed claim under 35 U.S.C. 120, 121, or365(c) for the benefit of a prior-filed application must be accompanied by: (i) The reference required by 35 U.S.C.120 and paragraph (a)(2) of this section to the prior-filed application, unless previously submitted; (ii) The surcharge set forth in §1.17(t); and (iii) A statement that the entire delay between the date the claim was due under paragraph (a)(2)(ii) of this section and the date the claim was filed was unintentional. The Commissioner may require additional information where there is a question whether the delay was unintentional.

7. Applicant's claim for domestic priority under 35 U.S.C. 119(e) is acknowledged. However, Applicant has not complied with one or more conditions for receiving the benefit of the earlier filing date of provisional application 60/060153. The present application does not share one or more named inventors with the provisional application.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 25, 27, 29-32, and 35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. These claims read on vaccines comprising RSV with mutated genomes, wherein the genome "contains sequences heterologous to that of native RSV." It is unclear what is meant by this phrase. In particular, it is unclear if by this phrase, the claim is requiring that the mutated genome comprises a sequence other than that of the native sequence of the particular RSV strain being modified, or if the mutated genome must be mutated to include a sequence not native to any RSV. For the purposes of this rejection, claims 27-32, 35, and 37 are being read as describing the modification that results in the attenuation of the claimed RSV (i.e. the RSV in the vaccine).

The identified language is also unclear because it does not indicate if it is the combination of multiple modifications that renders the RSV attenuated. It is unclear if the phrase "contains sequences heterologous to that of native RSV" requires that there be plural modifications, or if only one modification is sufficient. Further, it is unclear if the claim is indicating that the RSV genome must comprise multiple modifications, but that only one of the modification need result in an attenuated phenotype.

Claim 27 is further rejected for the language indicating that a heterologous sequence to that of native RSV comprises at least one modification "compared to the native RSV sequence." The Applicant has not identified any particular RSV sequence for comparison. Because it is not clear what sequence those in the art should compare the mutated sequence against, those in the art would not be able to determine whether or not a particular sequence has a modification in comparison to "the native sequence."

Claims 27-32, 35, and 37 are indefinite in that it is unclear if these claims are identifying the modification that results in the attenuated phenotype, or if they merely indicate that the attenuated virus must comprise such a modification.

Clarification is required.

10. Claim 26 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claim reads on a RSV vaccine comprising a RSV with "specific substitutions, deletions, or additions in the nucleotide sequence." It is unclear what is meant by identifying the mutations as "specific." I.e., it is not clear what is being excluded or included in the claim by use of the word "specific" to describe the additions, deletions, or substitutions in the viral genome.

11. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

12. Claims 25-32, and 35-37 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. These claims read on vaccines comprising an attenuated RSV.

While the Applicant has shown how to make attenuated RSV that may be able to raise an immunogenic response, the Applicant has not demonstrated that any RSV comprising a

heterologous gene would result in an effective RSV vaccine. It is noted that, in support of the Applicant's claims, the art recognizes that live attenuated virus may be a good approach to - eventually developing an effective anti-RSV vaccine. Kahn, Curr Opin Pediatr 12(3): 257-62, at 259). However, the art has also long recognized that there are several obstacles to the development of an effective RSC vaccine. See Murphy et al., Virus Res 32: 13-36 (1994- of record in the IDS filed on April 22, 2003). These difficulties are still present, and still hinder the development of such a vaccine. Thus, while the Applicant may have demonstrated that certain embodiments of the claimed composition may be effective in inducing immune responses in animals, the Applicant has not enabled the use of the claimed attenuated virus as a vaccine for humans.

An acknowledgement of such may be found in the June 2000 article by JS Kahn (supra), which stated that the "prevention of RSV disease continues to be a challenge..." Kahn, at 260 (last paragraph). See also, Crowe, Vaccine 20 (Supp 1): S32-S37 (teaching other obstacles from those in the Murphy article, including difficulties specific to attenuated live vaccines). Each of the Kahn and Crowe references identifies difficulties in developing RSV vaccines that need to be overcome, and careful balances between attenuation and immunogenicity that would be required for an effective live RSV vaccine. Thus, while the Applicant has described that making of attenuated and immunogenic chimeric viruses, the Applicant has not provided an enabling disclosure for an anti-RSV vaccine.

It is further noted that claim 26 reads on a vaccine comprising a RSV with specific mutations in the genome. The claim does not, however, indicate that the RSV particle has been attenuated or otherwise rendered acceptable for use in a vaccine. Thus, the claim reads on virus

comprising a mutation, but no changes in phenotype. Because the application and art are not enabling for the use of attenuated virus as vaccines, the application is also not enabled for the use of virus with a mutated genome, but a wild-type phenotype, as a vaccine.

13. Claims 25, 27, and 29-32, 35, and 36 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for certain embodiments of the claimed inventions, does not reasonably provide enablement for any attenuated RSV wherein the attenuation is due to a single nucleotide substitution, addition, or deletion. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make or use the invention commensurate in scope with these claims. The claims are rejected for two reasons. First, the application does not enable the full scope of the inventions described by claim 29 in that the application has not provided adequate information to enable those in the art to make any attenuated virus wherein the attenuation is caused by a single nucleotide substitution. Second, the Applicant has not provided adequate information such that those in the art could make an attenuated RSV by either making one insertion or deletion to the RSV genome.

In making a determination as to whether an application has met the requirements for enablement under 35 U.S.C. 112 ¶ 1, the courts have put forth a series of factors. See, In re Wands, 8 USPQ2d 1400, at 1404 (CAFC 1988); and Ex Parte Forman, 230 U.S.P.Q. 546 (BPAI 1986). The factors that may be considered include (1) the quantity of experimentation necessary, (2) the amount of direction or guidance presented, (3) the presence or absence of working examples, (4) the nature of the invention, (5) the state of the prior art, (6) the relative skill of

those in the art, (7) the predictability or unpredictability of the art, and (8) the breadth of the claims. Id. While it is not essential that every factor be examined in detail, those factors deemed most relevant should be considered.

In the present case, claim 25 (the independent claim) describes a vaccine comprising a RSV with a mutated genome, such that the mutation results in an attenuated phenotype. Claim 27 further limits the invention to embodiments wherein the mutation is one or more genetic modifications in comparison to the wild-type sequence. Each of claims 29-31 require that the genetic mutation, identified in claim 25 as causing the attenuated phenotype, is one of "a single nucleotide substitution," "an addition," or "a deletion." Thus, claim 29 requires that the attenuated phenotype is caused by a single nucleotide substitution. Claims 30 and 31 are being read as describing embodiments wherein any number of consecutive nucleotides may be added or deleted from the native sequence, and wherein these mutations are the cause of the attenuated phenotype. Thus, the claims broadly read on any attenuated RSV, wherein the attenuated phenotype is caused by a single nucleotide substitution, or any one addition or deletion to the native RSV genomic sequence.

The specification in the present case provides some examples of substitutions that result in RSV with attenuated phenotypes. See, Table II, and pages 56-59 (discussing substitution mutations to the L protein). However, the Applicant also demonstrated that, while some substitutions in the L gene lead to attenuated phenotypes, other resulted in no change, or in an improvement in the encoded proteins operation. Thus, the Applicant has demonstrated two things. First, that not every substitution, deletion, or addition will necessarily result in an attenuated phenotype. Second, the Applicant has also demonstrated that the effect of any

particular substitution (and thus deletion or addition) is unpredictable. I.e., the Applicant was unable to determine prior to making the substations what, if any, effect a particular substitution would have on the viral activity.

The teachings in the art of protein modification support the indications of unpredictability present in the present application. For example, Bowie (Science 247: 1306-10) teaches that, although proteins are generally tolerant to substitutions, the effect that substitution of any particular residue will have on a protein's function is dependant on the association of that residue to the protein's structure and function. The reference indicates that a particular residue may be open to any substitution, or may accept only conservative or no substitutions without an effect on protein function. Thus, the reference teaches that the art of protein modification is unpredictable. Further, while the reference indicates that some of the unpredictability may be resolved with teachings as to the relationship between the residue to be mutated and the protein structure and function, no teachings regarding the essential residues or structures of the RSV proteins have been provided in the present application. Thus, based on the teachings in the art and in the specification, the effects of any particular mutation to the RSV genome, and use of such mutation to effect attenuation of RSV, are clearly unpredictable arts.

While, as indicated above, the Applicant provides teachings regarding the making of attenuated RSV through mutations to the L gene, the application does not provide any specific examples of any insertion or deletions that may be made to the native viral genome such that the RSV will gain an attenuated phenotype. As illustrated by the Applicant, the effect of a particular mutation to the RSV genome may increase, decrease, or have no effect on the function of the mutated gene or the protein it encodes. Thus, in order to practice the claimed invention their full

scope, those in the art would be required to make, and then test the effects of every possible insertion, deletion, or substitution to the viral genome. Thus, while those in the art may be capable of performing such tests, given the breadth of the claims, the unpredictability of the art, and the limited guidance in the specification, the Applicant ahs not provided sufficient information such that those in the art may practice the full scope of the claimed inventions without undue experimentation.

Claim Rejections - 35 USC § 102

14. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

15. Claims 25-27, and 29 are rejected under 35 U.S.C. 102(b) as being anticipated by either of Crowe et al., Vaccine 12(8): 691-99 (of record in the August 6, 2001 IDS) or Crowe et al. Vaccine 12(9): 783-790, with each of these references read in light of the teachings of Murphy et al., U.S. Patent 5,993,824 (of record in the April 22, 2003 IDS). These claims read on attenuated RSV particles comprising a mutation in the genome wherein the mutation is a single nucleotide substitution.

The Crowe reference of Vaccine volume 12(8) teaches attenuated RSV particles designated RSV cpts-248 and RSC cpts-530. These viruses are disclosed in column 15, lines 44-64 of Murphy as comprising genetic substitution mutations in the gene coding for the L protein

of the RSV virus. Murphy teaches that the attenuated phenotypes of these viruses are due to single substitution mutations at particular positions in the RSV genome. Thus, the Crowe reference discloses an attenuated RSV particle with a substitution mutation resulting in a RSV with an attenuated phenotype.

The Crowe reference of Vaccine volume 12(9) also teaches the RSV cpts 248. the reference further teaches the insertion of an additional mutation to result in the RSV cpts 248/404. Murphy teaches (col 16, lines 2-8) that the attenuated phenotype in the RSV cpts 248/404 is also due to a particular substitution mutation in the viral genome. Thus, both of the Crowe et al. references cited above anticipate the identified claims.

16. Claims 25, 26, and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by either of Kim et al. (reference BC in the August 2001 IDS) or Hodes et al. (reference AX in the August 2001 IDS). The claims have been described above. Hodes describes a immunogenic formulation comprising a temperature-sensitive mutant of RSV. These references teach the modification of RSV using a chemical mutagen such that attenuated versions of the virus are formed. See e.g., Kim page 56. Although it is not clear what genomic modifications gave the modified viruses their attenuated phenotype, the references nonetheless teach attenuated RSV comprising a genomic modification that resulted in the attenuated phenotype. The references therefore anticipate the identified claims. While the references teach that the virus were not effective vaccines, it is not clear how they vary structurally from the presently claimed virus. Thus, because the virus disclosed by these references meet the structural limitations of the claims, they are considered to anticipate the claims.

17. Claims 25-27, and 30 rejected under 35 U.S.C. 102(b) as being anticipated by Bukreyev et al. (J Virol 70:6634-41).The claims have been described above. The reference teaches the making of a RSV comprising a addition to its genome, wherein the addition appears to have caused an attenuated phenotype. See, abstract (indicating the mutated RSV described therein had a reduced plaque size in comparison to the native RSV). The reference therefore anticipated the identified claims.

18. Claims 25-27, 31, 32, and 35 rejected under 35 U.S.C. 102(a) as being anticipated by Karron et al. PNAS 94:13961-66 . The claims read on attenuated RSV comprising a deletion in the gene encoding for the G protein. Karron teaches an attenuated RSV comprising a deletion in the gene coding for the G protein. The reference therefore anticipates the identified claims.

Claim Rejections - 35 USC § 103

19. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

20. Claims 25-32, 35-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over either of the Clarke et al. references: U.S. Patent 5,840,520, or WO 96/10632. The claims have been described above. Each of the Clarke et al references teaches or suggests RSV according to the present claims. See e.g. WO reference, claims 1 and 7-9, and pages 22-23, 37-38, and 68-69;

and U.S. patent, claims 6 and 7, columns 14(lines 38-58), 24(lines 28-40), 44(lines 33-43), and 47-48. Thus, the presently claimed viruses are rendered obvious by the teachings of the identified Clarke references.

21. Claims 25-32, 35, and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murphy et al., U.S. Patent 5,993,824. The claims have been described above. For the purposes of this rejection, the claims are being read such that claims 27-32, 35, and 37 are merely identifying mutations to the genome, and are not necessarily identifying the source of the attenuated phenotype. Murphy teaches the making and use of attenuated RSV particles. See, abstract. The reference further teaches the mutation or translocation of the G gene. See, columns 21-22, and column 26, lines 13-20. Thus, the reference teaches and suggests the making and use of RSV particles as described by the rejected claims.

Double Patenting

22. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

23. Claims 25 and 26 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 16 of U.S. Patent No. 5,166,057. Although the conflicting claims are not identical, they are not patentably distinct from each other because the presently rejected claims describe an obvious species of the genus of inventions claimed in the patent. The patent claim reads on a chimeric negative stranded virus comprising a heterologous sequence in its genome. The patent also teaches that the teachings of the patent relate to RSV. Column 16, lines 3-20. Thus, the claims of the present application are obvious variations of the virus claimed in the identified patent.

24. Claims 25-32, 35, and 37 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 6 and 7 of U.S. Patent No. 5,840,520. The claims have been described above. Although the conflicting claims are not identical, they are not patentably distinct from each other because the only difference between the present claims and those of the earlier patent is that the present claims require that the RSV have attenuated phenotypes. The '520 patent teaches at column 47, lines 14-22 that the chimeric virus of the patent may be made such that they have reduced pathogenicity compared to the wild-type virus. The reference further teaches that such attenuated virus may be made through the modification or translocation of the G gene. Columns 47-48. Thus, the reference teaches that the virus of the patent may be attenuated. The patent therefore renders obvious the presently rejected claims.

25. Claims 25-27, 32, 35 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 2-5, 13, and 18-20 of copending Application No. 09/161,122. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the co-pending application and the present application cover overlapping subject matter.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

26. Claims 25-27, 29-32, 35, and 36 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 49, 50, and 53 of copending Application No. 09/724,416. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the co-pending application and the present application cover overlapping subject matter.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion

27. No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zachariah Lucas whose telephone number is 571-272-0905. The examiner can normally be reached on Monday-Friday, 8 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Housel can be reached on 571-272-0902. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0196.

Z. Lucas
Patent Examiner

James C. Housel 2/9/04
JAMES HOUSEL
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1600